

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-11, 13, 15-20, 22-38, 40-44, and 47 are now pending in this application, with claims 4-8, 16-18, 20, 22, 25-28, 31, 33-35, 38, and 47 being withdrawn.

IDS

Applicant requests that the Examiner consider the IDS filed on January 1, 2011 and that an initialed and signed copy of the SB/08 form accompany the next office communication.

Objections to the Drawings

The Patent Office objects to the drawings under 37 CFR § 1.83(a), alleging that the features of claims 12 and 14 are not shown in the drawings. Claims 12 and 14 have been cancelled, rendering the objection moot.

Rejections under 35 U.S.C. § 112

Claims 1-3, 9-15, 19, 21, 23, 24, 29, 30, 32, 36, 37, 39-46, and 48 are rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. The claims have been amended to address the informalities cited by the Patent Office. Applicant respectfully requests favorable reconsideration of the rejection.

Rejections based on Pantow

Claims 1-3, 19, 21, 23, 29, 30, 39, 40, 43, 44, 46, and 48 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent Publication No. 2001/0052411 (“Pantow”). Claims 9-13, 15, 24, and 45 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Pantow, or, in the alternative, under 35 U.S.C. § 103(a) as allegedly being obvious over Pantow. Claims 36, 37, and 41 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Pantow. Applicant respectfully traverses this rejection for at least the following reasons.

Claims 1 is directed to a flow passage of a heat exchanger, the flow passage being configured to allow a flow of a medium therethrough, and the flow passage comprising a plurality of structure elements arranged in pairs such that each pair forms a V-shape, a first surface comprising a first plurality of the structure elements projecting into an interior of the flow passage and arranged in a first plurality of rows, wherein each of the rows in the first plurality of rows is transverse with respect to a direction of the flow, and a second surface comprising a second plurality of the structure elements projecting into the interior of the flow passage and arranged in a second plurality of rows, wherein each of the rows in the second plurality of rows is transverse with respect to the direction of the flow. ***Each of the rows in the first plurality of rows overlaps each of the rows in the second plurality of rows in the direction of the flow.*** Pantow does not teach this combination of features.

For example, Pantow does not teach that each of the rows in the first plurality of rows overlaps each of the rows in the second plurality of rows in the direction of the flow. In FIG. 12 of Pantow, cited by the Patent Office in the Office Action, only one of the rows of projections on the upper face overlaps a row of projections on the lower face. In claim, ***each of the rows*** in the first plurality of rows overlaps ***each of the rows*** in the second plurality of rows. Pantow does not teach this feature and thus does not anticipate claim 1.

The Patent Office takes Official Notice that “soldering or welding are both notoriously well known means of assembling heat exchanger tubes.” See Office Action at page 6. This is improper, as the Patent Office has provided no evidence in support of Official Notice.

Applicant respectfully request that the Office provide evidence in support of Official Notice, as it is difficult to judge the merits of the rejection without all evidence explicitly being set forth in the rejection.

Claims 12, 21, 39, 45, 46, and 48 are cancelled, rendering the rejection moot with respect to these claims. Claims 2, 3, 9-11, 13, 15, 21, 23, 24, 29, 30, 36, 37, 40, 41, 43, and 44 depend from claim 1, and are patentable for the same reasons as claim 1, without regard to the further patentable features contained therein.

Applicant respectfully requests favorable reconsideration of the rejection.

Rejections based on Rhodes

Claim 14 is rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 4,470,452 (“Rhodes”). Claim 14 is cancelled, rendering the rejection moot.

Rejections based on Sacca

Claim 42 is rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 4,470,455 (“Sacca”). Applicant respectfully traverses this rejection for at least the following reasons.

Claim 42 depends from claim 1, and thus includes all the features of claim 1. Claims 1 is directed to a flow passage of a heat exchanger, the flow passage being configured to allow a flow of a medium therethrough, and the flow passage comprising, among other things, a plurality of structure elements arranged in pairs such that each pair forms a V-shape. Sacca does not teach this combination of features.

For example, Sacca does not teach a plurality of structure elements arranged in pairs such that each pair forms a V-shape. Sacca teaches a fluid tube pass for a heat exchanger having ribbed channels. *See* Sacca at col. 3 ll. 9-15. The ribbed channels are not arranged in pairs, nor do they form a V-shape. *See, e.g.,* Sacca at FIG. 1. Thus, Sacca does not teach the combination of features of claim 1, and does not anticipate claim 1 or its dependent claim 42.

Applicant respectfully requests favorable reconsideration of the rejection.

Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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